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<120> A method of modulating cell survival, differentiation and/or synaptic plasticity

<130> P 810 PC00

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<170> PatentIn version 3.1

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<213> Rattus norvegicus

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Val Gly Glu Ser Lys Phe Phe Leu Cys Gln Val Ala Gly Asp Ala Lys

Asp Lys Asp Ile Ser Trp Phe Ser Pro Asn Gly Glu Lys Leu Ser Pro 50

Asn Gln Gln Arg Ile Ser Val Val Trp Asn Asp Asp Ser Ser Thr

Leu Thr Ile Tyr Asn Ala Asn Ile Asp Asp Ala Gly Ile Tyr Lys Cys

Val Val Thr Ala Glu Asp Gly Thr Gln Ser Glu Ala Thr Val Asn Val

Lys Ile Phe Gln Lys Leu Met Phe Lys Asn Ala Pro Thr Pro Gln Glu 115

Phe Lys Glu Gly Glu Asp Ala Val Ile Val Cys Asp Val Val Ser Ser 130

Leu Pro Pro Thr Ile Ile Trp Lys His Lys Gly Arg Asp Val Ile Leu 145

Lys Lys Asp Val Arg Phe Ile Val Leu Ser Asn Asn Tyr Leu Gln Ile 165

Arg Gly Ile Lys Lys Thr Asp Glu Gly Thr Tyr Arg Cys Glu Gly Arg 180

Ile Leu Ala Arg Gly Glu Ile Asn Phe Lys Asp Ile Gln Val Ile Val

| 11 |
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| |

230

| Asn | Val 210 | Pro | Pro | Thr | Val | Gln 215 | Ala | Arg | Gln | Ser | Ile 220 | Val | Asn | Ala | Thr | |
|-----|------------|-----|-----|-----|-----|------------|-----|-----|-----|-----|------------|-----|-----|-----|-----|--|
| Ala | Asn | Leu | Gly | Gln | Ser | Val | Thr | Leu | Val | Cys | Asp | Ala | Asp | Gly | Phe | |

| Trp | Phe | Arg | Asp | Gly | Gln | Leu | Leu | Pro | Ser | Ser | Asn | Tyr | Ser | Asn | Ile |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | 450 | | | | | 455 | | | | | 460 | | | | |

| Lys | Ile | Tyr | Asn | Thr | Pro | Ser | Ala | Ser | Tyr | Leu | Glu | Val | Thr | Pro | Asp |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 465 | | | | | 470 | | | | | 475 | | | | | 480 |

Ser Glu Asn Asp Phe Gly Asn Tyr Asn Cys Thr Ala Val Asn Arg Ile 485 490 495

Gly Gln Glu Ser Leu Glu Phe Ile Leu Val Gln Ala Asp Thr Pro Ser 500 505 510

Ser Pro Ser Ile Asp Arg Val Glu Pro Tyr Ser Ser Thr Ala Gln Val

Gln Phe Asp Glu Pro Glu Ala Thr Gly Gly Val Pro Ile Leu Lys Tyr 530 535 540

Lys Ala Glu Trp Lys Ser Leu Gly Glu Glu Ala Trp His Ser Lys Trp 545 550 555 560

Tyr Asp Ala Lys Glu Ala Asn Met Glu Gly Ile Val Thr Ile Met Gly 565 570 575

Leu Lys Pro Glu Thr Arg Tyr Ala Val Arg Leu Ala Ala Leu Asn Gly
580 585 590

Lys Gly Leu Gly Glu Ile Ser Ala Ala Thr Glu Phe Lys Thr Gln Pro 595 600 605

Val Arg Glu Pro Ser Ala Pro Lys Leu Glu Gly Gln Met Gly Glu Asp 610 615 620

Gly Asn Ser Ile Lys Val Asn Leu Ile Lys Gln Asp Asp Gly Gly Ser 625 630 635 640

Pro Ile Arg His Tyr Leu Val Lys Tyr Arg Ala Leu Ala Ser Glu Trp 645 650 655

Lys Pro Glu Ile Arg Leu Pro Ser Gly Ser Asp His Val Met Leu Lys 660 665 670

Ser Leu Asp Trp Asn Ala Glu Tyr Glu Val Tyr Val Val Ala Glu Asn 675 680 685

Gln Gln Gly Lys Ser Lys Ala Ala His Phe Val Phe Arg Thr Ser Ala 690 695 700

Gln Pro Thr Ala Ile Pro Ala Asn Gly Ser Pro Thr Ala Gly Leu Ser 705 710 715 720

Thr Gly Ala Ile Val Gly Ile Leu Ile Val Ile Phe Val Leu Leu Leu 725 730 735

Val Val Met Asp Ile Thr Cys Tyr Phe Leu Asn Lys Cys Gly Leu Leu 740 745 750

Met Cys Ile Ala Val Asn Leu Cys Gly Lys Ala Gly Pro Gly Ala Lys 755 760 765

Gly Lys Asp Met Glu Glu Gly Lys Ala Ala Phe Ser Lys Asp Glu Ser 770 775 780

Lys Glu Pro Ile Val Glu Val Arg Thr Glu Glu Glu Arg Thr Pro Asn 785 790 795 800

His Asp Gly Gly Lys His Thr Glu Pro Asn Glu Thr Thr Pro Leu Thr 805 810 815

Glu Pro Glu Lys Gly Pro Val Glu Thr Lys Ser Glu Pro Gln Glu Ser 820 825 830

Glu Ala Lys Pro Ala Pro Thr Glu Val Lys Thr Val Pro Asn Glu Ala 835 840 845

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Asp Lys Asp Ile Ser Trp Phe Ser Pro Asn Gly Glu Lys Leu Thr Pro 50 60

Asn Gln Gln Arg Ile Ser Val Val Trp Asn Asp Asp Ser Ser Ser Thr 65 70 75 80

Leu Thr Ile Tyr Asn Ala Asn Ile Asp Asp Ala Gly Ile Tyr Lys Cys
85 90 95

Val Val Thr Gly Glu Asp Gly Ser Glu Ser Glu Ala Thr Val Asn Val 100 105 110

Lys Ile Phe Gln Lys Leu Met Phe Lys Asn Ala Pro Thr Pro Gln Glu 115 120 125

Phe Arg Glu Gly Glu Asp Ala Val Ile Val Cys Asp Val Val Ser Ser 130 135 140

Leu Pro Pro Thr Ile Ile Trp Lys His Lys Gly Arg Asp Val Ile Leu 145 150 155 160

Lys Lys Asp Val Arg Phe Ile Val Leu Ser Asn Asn Tyr Leu Gln Ile 165 170 175

Arg Gly Ile Lys Lys Thr Asp Glu Gly Thr Tyr Arg Cys Glu Gly Arg 180 185 190

Ile Leu Ala Arg Gly Glu Ile Asn Phe Lys Asp Ile Gln Val Ile Val 195 200 205

Asn Val Pro Pro Thr Ile Gln Ala Arg Gln Asn Ile Val Asn Ala Thr 210 215 220

Ala Asn Leu Gly Gln Ser Val Thr Leu Val Cys Asp Ala Glu Gly Phe 225 230 235 240

| Pro Glu | Pro | Thr | Met 245 | Ser | Trp | Thr | Lys | Asp 250 | Gly | Glu | Gln | Ile | Glu 255 | Gln |
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| Glu Glu | ı Asp | Asp 260 | Glu | Lys | Tyr | Ile | Phe 265 | Ser | Asp | Asp | Ser | Ser 270 | Gln | Leu |

Thr Ile Lys Lys Val Asp Lys Asn Asp Glu Ala Glu Tyr Ile Cys Ile 275 280 285

Ala Glu Asn Lys Ala Gly Glu Gln Asp Ala Thr Ile His Leu Lys Val 290 295 300

Phe Ala Lys Pro Lys Ile Thr Tyr Val Glu Asn Gln Thr Ala Met Glu 305 310 315 320

Leu Glu Glu Gln Val Thr Leu Thr Cys Glu Ala Ser Gly Asp Pro Ile 325 330 335

Pro Ser Ile Thr Trp Arg Thr Ser Thr Arg Asn Ile Ser Ser Glu Glu 340 345 350

Lys Thr Leu Asp Gly His Met Val Val Arg Ser His Ala Arg Val Ser 355 360 365

Ser Leu Thr Leu Lys Ser Ile Gln Tyr Thr Asp Ala Gly Glu Tyr Ile 370 375 380

Cys Thr Ala Ser Asn Thr Ile Gly Gln Asp Ser Gln Ser Met Tyr Leu 385 390 395 400

Glu Val Gln Tyr Ala Pro Lys Leu Gln Gly Pro Val Ala Val Tyr Thr 405 410 415

Trp Glu Gly Asn Gln Val Asn Ile Thr Cys Glu Val Phe Ala Tyr Pro
420 425 430

Ser Ala Thr Ile Ser Trp Phe Arg Asp Gly Gln Leu Leu Pro Ser Ser 435 440 445

Asn Tyr Ser Asn Ile Lys Ile Tyr Asn Thr Pro Ser Ala Ser Tyr Leu 450 455 460

Glu Val Thr Pro Asp Ser Glu Asn Asp Phe Gly Asn Tyr Asn Cys Thr 465 470 475 480

| Ala | Val | Asn | Arg | Ile 485 | Gly | Gln | Glu | Ser | Leu 490 | Glu | Phe | Ile | Leu | Val 495 | Gln |
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| Ala | Asp | Thr | Pro 500 | Ser | Ser | Pro | Ser | Ile 505 | Asp | Gln | Val | Glu | Pro 510 | Tyr | Ser |
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| Pro | Ile 530 | Leu | Lys | туг | Lys | Ala 535 | Glu | Trp | Arg | Ala | Val 540 | Gly | Glu | Glu | Val |
| Trp 545 | His | Ser | ГÀЗ | Trp | Tyr 550 | Asp | Ala | Lys | Glu | Ala 555 | Ser | Met | Glu | Gly | Ile 560 |
| Val | Thr | Ile | Val | Gly 565 | Leu | Lys | Pro | Glu | Thr 570 | Thr | Tyr | Ala | Val | Arg 575 | Leu |
| Ala | Ala | Leu | Asn 580 | Gly | Lys | Gly | Leu | Gly 585 | Glu | Ile | Ser | Ala | Ala 590 | Ser | Glu |
| Phe | Lys | Thr 595 | | Pro | Val | Gln | Gly 600 | Glu | Pro | Ser | Ala | Pro 605 | Lys | Leu | Glu |
| | 610 | | | | | 615 | | | | | 620 | | | | Lys |
| 625 | | | | | 630 | | | | | 635 | | | | | Arg 640 |
| | | | | 645 | | | | | 650 | | | | | 655 | Ser |
| | | | 660 | | | | | 665 | | | | | 670 | | Val |
| | | 675 | | | | | 680 | | | | | 685 | | | Phe |
| | 690 | | | | | 695 | | | | | 700 | | | | Ser |
| Pro 705 | Thr | Ser | Gly | Leu | Ser 710 | | Gly | Ala | Ile | 715 | | Ile | Leu | Ile | Val 720 |

Ile Phe Val Leu Leu Val Val Val Asp Ile Thr Cys Tyr Phe Leu 725 730 735

Asn Lys Cys Gly Leu Phe Met Cys Ile Ala Val Asn Leu Cys Gly Lys 740 745 750

Ala Gly Pro Gly Ala Lys Gly Lys Asp Met Glu Glu Gly Lys Ala Ala 755 760 765

Phe Ser Lys Asp Glu Ser Lys Glu Pro Ile Val Glu Val Arg Thr Glu 770 775 780

Glu Glu Arg Thr Pro Asn His Asp Gly Gly Lys His Thr Glu Pro Asn 785 790 795 800

Glu Thr Thr Pro Leu Thr Glu Pro Glu Lys Gly Pro Val Glu Ala Lys 805 810 815

Pro Glu Cys Gln Glu Thr Glu Thr Lys Pro Ala Pro Ala Glu Val Lys 820 825 830

Thr Val Pro Asn Asp Ala Thr Gln Thr Lys Glu Asn Glu Ser Lys Ala 835 840 845